Appl. No.: 10/072,789
Amdt. Dated 05/06/05
Reply to Final Office Action of 03/07/2005

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1. (currently amended) A structural member, comprising:

a first region comprising at least a portion of the exterior of the structural member, said first region being characterized by comparatively high operational stress; and

a second region comprising at least a portion of the exterior of the structural member, said second region having a more refined grain structure than other portions of the structural member, said second region being formed by at least one of partial-penetration and full-penetration mixing and wherein said second region at least partially encompasses said first region to thereby selectively improve the strength, toughness and fatigue resistance of the structural member in said first region; and wherein the structural member has a tubular configuration.

2. (original) A structural member as defined in Claim 1 further comprising a threaded opening at least partially contained within said second region.

3. (original) A structural member as defined in Claim 1 wherein the structural member is formed of materials selected from the group consisting of steel, stainless steel, magnesium, magnesium-based alloys, brass, copper, beryllium, beryllium-copper alloys, aluminum, aluminum-based alloys, aluminum-zinc alloys, aluminum-copper alloys, aluminum-lithium alloys, and titanium.

Claims 4-6 (cancelled).

7. (original) A structural member as defined in Claim 1 wherein the structural member defines a plurality of regions having refined grain structures, said regions being spaced apart and generally parallel.